

REMARKS

Claims 1-20 are currently pending.

The amendment of Claims 1, 5, 7, 13, 14, and 20 is supported by the original disclosure. The support for the amendment of claims 1 and 5 is found in FIG. 4. The support for the amendment of Claim 7 is found in FIGs. 3C, 3D, and 3E. The support for the amendment of Claim 13 is found in FIG. 3F. The support for the amendment of Claim 14 is found in FIGs. 3C-3F. The support for the amendment of Claim 20 is found on page 6, line 4, and page 7, line 24, of the specification.

It is respectfully submitted that no new matter has been added.

Claim Rejections – 35 USC § 102

The Patent Office rejected Claims 1-4 and 6-20 under 35 U.S.C. 102(e) as being anticipated by Tosaki et al. (U.S. 6,272,020).

It is believed that Tosaki does not anticipate Claims 1-4 and 6-20. Accordingly, withdrawal of the 35 USC 102(e) rejection is respectfully requested.

Claim Rejection – 35 U.S.C. § 103(a)

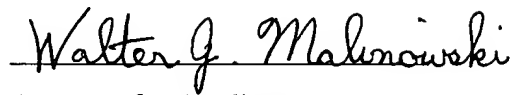
The Patent Office rejected Claim 5 under 35 U.S.C. 103(a) as being unpatentable over Tosaki et al. (U.S. 6,272,020) in view of Hussain et al. (U.S. 6,344,684).

It is believed that Tosaki in view of Hussain does not make Claim 5 obvious. Accordingly, withdrawal of the 35 USC 103(a) rejection is respectfully requested.

CONCLUSION

In light of the forgoing amendments, reconsideration of the claims is hereby requested, and a Notice of Allowance is earnestly solicited.

Respectfully submitted,



Attorney for Applicant
Walter J. Malinowski
Reg. No. 43,423

Walter J. Malinowski
Suiter & Associates PC
14301 FNB Parkway, Suite 220
Omaha, Nebraska 68154
Telephone 402.496.0300
Facsimile 402.496.0333

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

1. (Twice Amended) A converter device, comprising:
a board having a first side and a second side, wherein
the first side includes a first set of contacts suitable for electrically contacting an integrated circuit having a first configuration; and

the second side includes a second set of contacts suitable for electrically contacting a circuit board having a second configuration, wherein the second set of contacts are communicatively coupled to the first set of contacts;

the board including a first plane, a second plane, and a third plane disposed between and substantially in parallel to the first and second sides, the second plane being disposed between the first and third planes, the second plane being a signal layer electrically connecting the first set of contacts to the second set of contacts,

wherein contacts having a function configured in the first configuration are not arranged with contacts having a corresponding function configured in the second configuration, and wherein the set of contacts of the first configuration and the second configuration have a substantially similar size.

5. (Amended) The converter device as described in claim 1, ~~further comprising a power layer and a ground layer~~ wherein the first plane is a ground layer and the third plane is either a power layer or a ground layer.

7. (Thrice Amended) An apparatus, comprising:
an integrated circuit including a set of contacts, wherein the integrated circuit set of contacts is suitable for operation in a first configuration, the first configuration having an arrangement of contacts and corresponding functions of arranged integrated circuit contacts;

a circuit board including a set of contacts, wherein the circuit board set of contacts is suitable for operation in a second configuration, the second configuration having an arrangement of contacts and corresponding functions of arranged circuit board contacts, wherein the contacts of the second configuration are situated to correspond to the contacts of the first configuration of the integrated circuit, and arrangement of functions of the contacts of the second configuration does not correspond to arrangement of functions of the contacts of the first configuration; and

a converter device disposed between the integrated circuit and the circuit board,

wherein the converter board includes a first set of contacts suitable for contacting the integrated circuit having the first configuration, and a second set of contacts suitable for contacting the circuit board having the second configuration, wherein the first set of contacts is communicatively coupled to the second set of contacts and wherein contacts having a function configured in the first configuration are not arranged with contacts having a corresponding function configured in the second configuration,

wherein an electrical connection within the converter board extends two dimensionally within a major plane of extension of the converter board, the major plane of extension of the converter board being substantially parallel to major planes of extension of the circuit board and the integrated circuit, the electrical connection electrically connecting at least one of the first set of contacts with at least one of the second set of contacts.

13. (Amended) The apparatus as described in claim 12, further comprising a third converter board, wherein the first converter board includes the first set of contacts and the second converter board includes the second set of contacts, the first set of contacts being communicatively coupled to the second set of contacts utilizing a third set of contacts, the third converter board, and a fourth set of contacts ~~an intermediate set of contacts~~.

14. (Thrice Amended) An apparatus, comprising:

an integrated circuit including a set of contacts, wherein the integrated circuit set of contacts is suitable for operation in a first configuration, the first configuration having

an arrangement of contacts and corresponding functions of arranged integrated circuit contacts;

a circuit board including a set of contacts, wherein the circuit board set of contacts is suitable for operation in a second configuration, the second configuration having an arrangement of contacts and corresponding functions of arranged circuit board contacts, wherein the contacts of the second configuration are situated to correspond to the contact of the first configuration of the integrated circuit, and arrangement of functions of the contacts of the second configuration does not correspond to arrangement of functions of the contacts of the first configuration; and

a converter device disposed between the integrated circuit and the circuit board, wherein the converter device includes a first set of contacts suitable for contacting the integrated circuit having the first configuration and a second set of contacts suitable for contacting the circuit board having the second configuration, the first set of contacts electrically coupled to the second set of contacts via electrical connections, wherein the electrical connections extend two dimensionally in a major plane of extension of the converter device and extend two dimensionally in a minor plane of extension perpendicular to the major plane of extension of the converter device, wherein contacts having a function configured in the first configuration are not arranged with contacts having a corresponding function configured in the second configuration.

20. (Amended) The apparatus as described in claim 19, wherein the first converter board includes the first set of contacts and the second converter board includes the second set of contacts, the first set of contacts being communicatively coupled to the second set of contacts utilizing an intermediate set of contacts, wherein the first set of contacts, the second set of contacts, and the intermediate set of contacts include solder balls.